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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,507	04/14/2004	James M. Chwalek	83330WRZ	6458

7590 04/13/2007
Mark G. Bocchetti
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343 State Street
Rochester, NY 14650-2201

EXAMINER

MARTIN, LAURA E

ART UNIT	PAPER NUMBER
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2853

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/824,507	Applicant(s) CHWALEK ET AL.	
	Examiner Laura E. Martin	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 2-5 and 13-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 6-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Species 1b, Sub-species 6b in the reply filed on 14 February 2007 is acknowledged. The traversal is on the ground(s) that "no serious burden" would be imposed on the examiner. This is not found persuasive because although there is no requirement to show separate classification in regards to an election of species, a burden does exist because a separate search is required for each species and sub-species.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Hawkins (US 6572222).

Hawkins discloses a fluid chamber having an orifice (figure 1C, element 18); a fluid drop forming mechanism (figure 1, element 30) associated with the fluid chamber and being operable to apply to fluid present in the chamber energy sufficient to cause a fluid drop to be ejected from the orifice (column 5, lines 30-61); and a fluid drop steering device associated with the fluid chamber and being operable to optionally apply energy

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insufficient to cause drop formation to fluid present in the fluid chamber prior to the fluid being ejected from the orifice, the fluid drop steering device being distinct from the fluid drop forming mechanism (figure 1C, element 32).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkins (US 6572222) in view of Anagnostopoulos et al. (US 6213595).

Hawkins discloses the following claim limitations: The printhead of claim 1.

Hawkins does not disclose the following claim limitations:

As per claim 6: a printhead wherein the fluid drop steering device is a heater operatively associated with the fluid chamber.

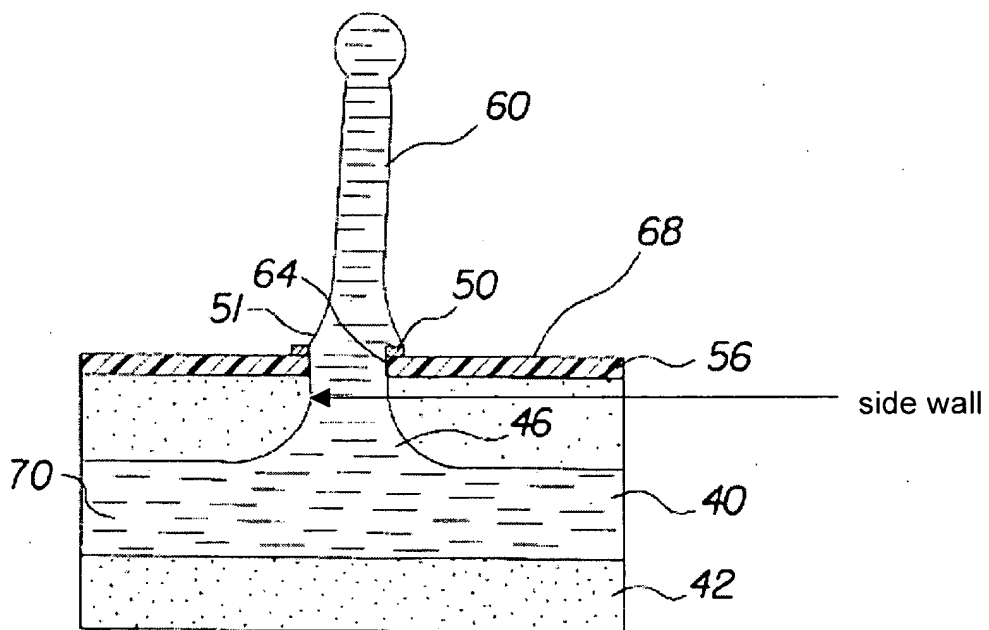
As per claim 7: a printhead the fluid chamber having a side wall, wherein the heater is formed as a portion of the side wall.

As per claim 8: a printhead wherein the heater is in electrical communication with electrical contacts located outside of the fluid chamber.

Anagnostopoulos et al. disclose the following claim limitations:

As per claim 6, Anagnostopoulos et al. teaches a printhead, wherein the fluid drop steering device is a heater (figure 2A, element 50) operatively associated with the fluid chamber (figure 2A, element 46).

As per claim 7, Anagnostopoulos et al. teaches a printhead, the fluid chamber having a side wall (shown below), wherein the heater is formed as a portion of the side wall (figure 2A, element 50).



As per claim 8, Anagnostopoulos et al. teaches a printhead, wherein the heater is in electrical communication with electrical contacts located outside of the fluid chamber (figure 1, element 14 and column 3, lines 40-48).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printhead taught by Hawkins with the disclosure of Anagnostopoulos et al. in order to produce high quality images at a low cost.

Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkins (US 6572222) and Anagnostopoulos et al. (US 6213595), and further in view of Dante et al. (US 2002/0093547).

Hawkins discloses the following claim limitations:

As per claim 9, Hawkins as modified teaches the printhead of claim 6.

Anagnostopoulos et al. disclose the following claim limitations:

As per claim 10, Anagnostopoulos et al. teaches the chamber having a side wall (shown above), wherein the heater is located adjacent to the side wall (figure 2A, element 50).

As per claim 11, Anagnostopoulos et al. teaches the heater coupled to the fluid drop forming mechanism (column 3, lines 35-47).

Hawkins as modified do not disclose the following claim limitations:

As per claim 9, Hawkins as modified does not teach a heater being located in the fluid chamber.

As per claim 12, Hawkins as modified does not teach an orifice being located in a nozzle plate, wherein the heater is located adjacent to the nozzle plate.

Dante et al. disclose the following claim limitations:

As per claim 9, Dante et al. teach a heater (figure 1, element 106) being located in the fluid chamber (figure 1, element 114).

As per claim 12, Dante et al. teach an orifice being located in a nozzle plate, wherein the heater is located adjacent to the nozzle plate (figure 1, element 108).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the printhead of Hawkins as modified with the disclosure of Dante et al. in order to create a higher quality printing apparatus in which the ink is located closer to the heater, thus being heated at a quicker rate.

Response to Arguments

Applicant's arguments filed 11/13/06 have been fully considered but they are not persuasive.

The examiner respectfully disagrees with the applicant's arguments for two reasons. First, the claim language allows for the fluid drop steering device to "*optionally* apply energy insufficient to cause drop formation to fluid present in the fluid chamber when the fluid is within the fluid chamber". Thus, it is optional not to apply the energy while the fluid is within the fluid chamber. Second, the claim language does not specifically state that the drop steering device is applying energy to the liquid inside of the fluid chamber, rather that the energy is insufficient to cause drop formation to the fluid present in the fluid chamber when the fluid is within the fluid chamber. Therefore, the steering device could be applying energy to the droplet after it has exited the fluid

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chamber, as it does not specifically state the exact location of where the energy is being applied.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hawkins et al. (US 6561616) discloses a fluid drop steering device within an ink chamber.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

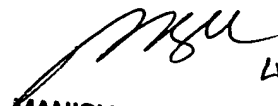
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laura E. Martin

 4/10/07
MANISH S. SHAH
PRIMARY EXAMINER